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THE POPULATION OF FLORIDA:

REGIONAL COMPOSITION AND GROWTH AS INFLUENCED BY SOIL, CLIMATE, AND MINERAL DISCOVERIES

By **ROLAND M. HARPER**

The population of Florida has always been rather unequally distributed, mainly on account of the great variety of soil and topographic conditions in the state. About twenty-five geographical divisions (Fig. 1), each differing in density, composition, and rate of increase of population, are easily distinguished,[1] but most of these do not include the whole of any one county, so that it is not possible to get accurate statistics for them from census reports. If, however, the state is divided along county boundaries into five somewhat arbitrary divisions (Fig. 2) we can still get sufficient contrast to illustrate some interesting principles of anthropogeography.

In studying the historical development of population in limited areas by means of census statistics one should be careful to avoid being misled by changes of county boundaries between censuses; and such changes have been more frequent in Florida in recent years than in most other eastern states, on account of the rapid increase of population. (There are over three times as many counties in Florida now as there were in 1830, when the first census was taken.) But the boundaries of the divisions to be discussed presently have been very little affected by county changes since the first census of the state (or territory, as it was then), except that between the fourth and fifth divisions; and that difficulty has been circumvented by combining those two divisions for the first three censuses and making allowance in the computations for a considerable change that was made in 1905, by the creation of St. Lucie County.

The divisions here adopted, with their areas, are as follows:[2]

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[1] For descriptions of these divisions see—

R. M. Harper: Preliminary Report on the Peat Deposits of Florida, *3rd Annual Rept. of the Florida Geol. Surv.*, Tallahassee, 1910, pp. 197-375; specifically section on "Natural Divisions of the State," pp. 216-229 and Pl. 16.

R. M. Harper: Geography and Vegetation of Northern Florida, *6th Annual Rept. of the Florida Geol. Surv.*, Tallahassee, 1914, pp. 163-437; specifically section on geographical divisions, pp. 190-343, and Fig. 40.,

[2] It has been quite customary to accept without question the figures for county areas given in the government census reports; but in Florida at least there are remarkable discrepancies between the figures for the same county at different censuses which cannot be wholly explained by changes of boundaries. So the areas have been measured independently by the writer by counting the townships and fractions thereof on a large map of the state on a scale of 10 miles to the inch which is published by the state agricultural department and revised every year or two (see note in the October *Review*, p. 303). Only land area is considered, but in some of the counties, particularly Monroe, it is impossible to decide just where land ends and water begins, and two different surveyors might make very different estimates. And in Palm Beach, Broward, and Dade Counties the Everglades, which cover a few thousand square miles, are more or less navigable in the rainy season, but they are usually counted as land, especially since the beginning of the drainage operations whose object is to convert the area into farms. The areas are expressed in multiples of 5 square miles, for it seems useless to attempt any greater accuracy than that under the circumstances.

1. *West Florida,* embracing the present counties of Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Jackson, and Calhoun. Area, 7,515 square miles.

2. *Middle Florida.* Franklin, Liberty, Gadsden, Leon, Wakulla, Jefferson, Madison, Hamilton, Taylor, Lafayette. 7,225 square miles.

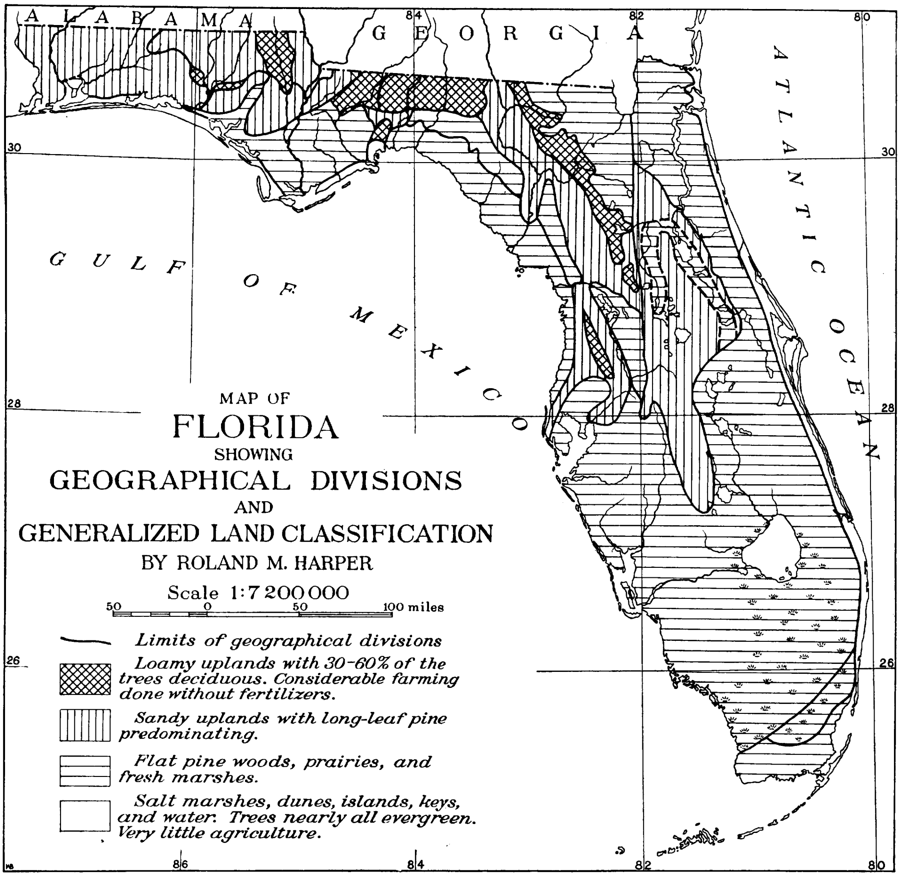
ALABAMA
GEORGIA
ATLANTIC OCEAN
GULF OF MEXICO
30
28
26
86
84
82
80
MAP OF
FLORIDA
SHOWING
GEOGRAPHICAL DIVISIONS
AND
GENERALIZED LAND CLASSIFICATION
BY ROLAND M. HARPER
Scale 1:7 200 000
50 0 50 100 miles
Limits of geographical divisions
▩ Loamy uplands with 30-60% of the trees deciduous. Considerable farming done without fertilizers.
▥ Sandy uplands with long-leaf pine predominating.
▤ Flat pine woods, prairies, and fresh marshes.
☐ Salt marshes, dunes, islands, keys, and water. Trees nearly all evergreen. Very little agriculture.

FIG. 1.

Note: The small area on the east bank of the Apalachicola River at the Georgia boundary (85° W.) should be ruled with the symbol indicating loamy uplands.

3. *Northeast Florida.* Suwannee, Columbia, Alachua, Baker, Bradford, Nassau, Duval, Clay, Putnam, St. John's. 7,415 square miles.

4. *Central Florida.* Levy, Marion, Volusia, Citrus, Hernando, Pasco, Sumter, Lake, Seminole, Orange, Pinellas, Hillsborough, Polk, Osceola, Brevard. 14,485 square miles.

5. *South Florida.* Manatee, DeSoto, Lee, St. Lucie, Palm Beach, Broward, Dade, Monroe. 16,530 square miles.

West and Middle Florida have rivers for their eastern and western boundaries (except that a small part of Franklin County is on the west side of the Apalachicola River) and have long been recognized in popular parlance. The southern boundary of Northeast Florida corresponds roughly with the line between cotton and oranges and is the line at which it was proposed at the 1915 session of the Legislature to cut the state in two. The first three divisions, which are of very nearly the same size, were described together in considerable detail in the Sixth Annual Report of the State Geological Survey, with many geographical statistics.[3] The boundary between Central and South Florida is more arbitrary than the others, but has been selected to make the two divisions approximately the same size.

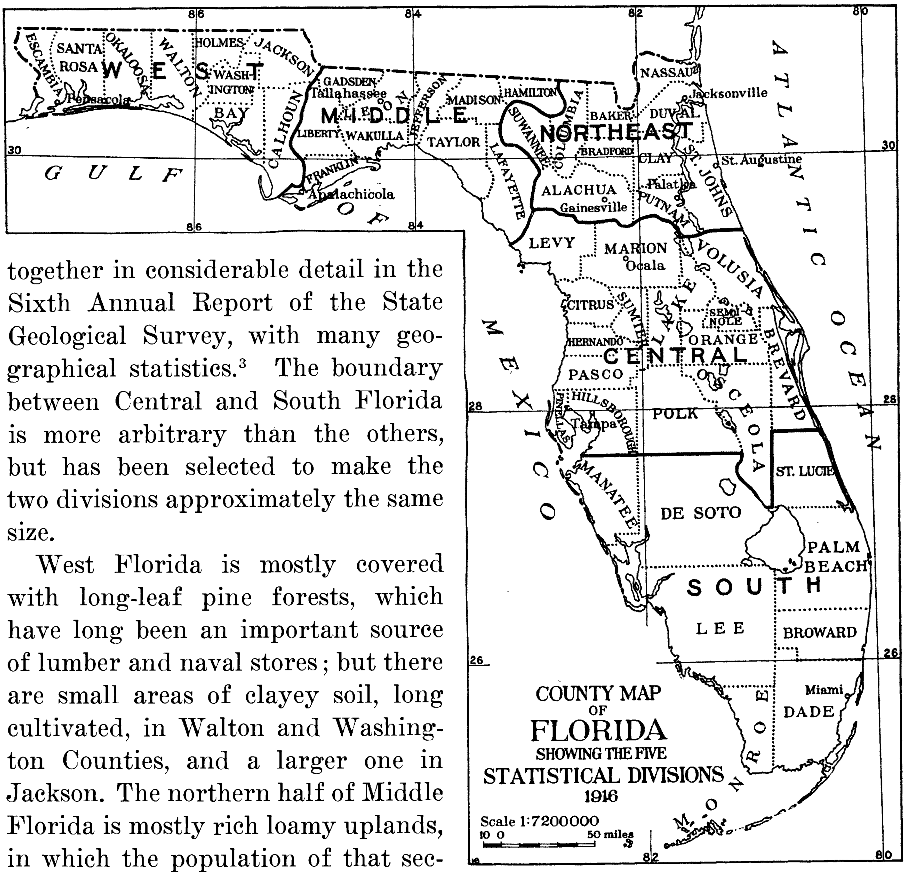

Fig. 2.

West Florida is mostly covered with long-leaf pine forests, which have long been an important source of lumber and naval stores; but there are small areas of clayey soil, long cultivated, in Walton and Washington Counties, and a larger one in Jackson. The northern half of Middle Florida is mostly rich loamy uplands, in which the population of that section has always been chiefly concentrated, and agriculture is the leading industry there. The southern half, however, has considerable areas of damp, uninhabited flat pine woods. Northeast Florida is mostly sandy pine woods which have been the scene of active lumbering operations, but there is a belt of rich hammock land in Suwannee, Columbia, and Alachua Counties. Jacksonville, the state's most important seaport and railroad center and consequently the largest city, is located in this division, and that of course has an important influence on the population statistics.

Central Florida has a few hundred square miles of fertile hammocks in

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[3] Second paper mentioned in footnote 1.

Marion and Hernando Counties, but the remainder is mostly pine land, which was considered almost worthless for agricultural purposes a few decades ago. Since 1888 there has been considerable phosphate mining in the western half of this section; and the winter tourist business is another flourishing industry. The cultivation of the strictly tropical fruits, which cannot endure frost, is chiefly confined to South Florida, which has very little land suitable for ordinary farming as practiced in the northern part of the state and in the South generally. Tourists have also contributed largely to its wealth in recent years.

Some other geographical features of the several divisions will be brought out in discussing the population table.

The United States government has made a census of Florida at every decade beginning with 1830, and the state agricultural department has done likewise at similar intervals, beginning with 1885. The government census of 1870 is admitted by the Census Bureau to have been very incomplete for the southeastern states, and consequently it is left out of consideration here, for any comparisons of the returns from it with those of the preceding and following censuses would be misleading. Separate figures for whites and negroes are not available for the government census of 1830 and the state census of 1885. In the state census of 1905 as published the figures do not balance, presumably on account of typographical errors, and it is no longer possible to check them from the original manuscript, but these errors do not make more than a few hundred difference in the totals. (The trouble is mostly in the returns for Volusia County.) In most of the censuses the county totals include a few Indians, Chinese, etc., and are therefore greater than the sum of the whites and negroes. In the 1915 census convicts and lunatics in state institutions do not seem to be counted in the counties where they are stationed, but there are only about a thousand of each class, and they do not materially affect the sectional totals. The Seminole Indians of the Everglade region do not seem to have been counted since 1900, but there are probably only a few hundred of them.

The following table[4] gives for each of the five divisions and for the whole state the density of population in inhabitants per square mile at each census (omitting that of 1870 for the reason given), the percentage of whites at each census except those of 1830, 1870, and 1885, and the percentages of decennial increase of population at each of the last six censuses. By giving the increase for decades and not for five-year periods comparison between state and government censuses is avoided, but the reader can make such comparisons for himself by means of the figures for density of population.

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[4] A somewhat similar table, prepared by the writer about a year ago, is incorporated in the report of the fourth state census (noticed in the October *Review*, p. 303), as Table 3, pp. 18-19. The principal differences, for which the state authorities are mainly responsible, are: the addition of the absolute figures for population, the omission of the race percentages for 1840 (which I did not get until a few months later), the inclusion of the inaccurate 1870 census, the substitution of quinquennial for decennial percentages of increase at the last seven censuses, and a few errors, such as 1.9 instead of 1.8 for the density of population of Northeast Florida in 1840, and 6.0 instead of 11.1 for Middle Florida, 1880.

The fact that different censuses were not all taken at the same season has had some effect on the apparent percentages of increase in Florida, on account of the considerable seasonal fluctuations of population. The last government census was taken about two months earlier than previous ones, and the last state census was taken in July and August, when thousands of Floridians were away for the summer.

Because of the limitation of the printed page to two dimensions, three kinds of statistics have to be put in the same column, which is a little troublesome to the reader, but this difficulty is partly overcome by printing the figures for density of population in heavier type.

TABLE SHOWING DENSITY, RACIAL COMPOSITION, AND GROWTH OF THE POPULATION OF FLORIDA, 1830-1915

DIVISIONS ——>		WEST	MIDDLE	NORTHEAST	CENTRAL	SOUTH	THE STATE
LAND AREA (square miles)——>		7,515	7,225	7,415	14,485	16,530	53,170
1830.	Density	**1.3**	**2.2**	**1.1**	**0.04**		**0.65**
1840.	Whites	55.5%	41.8%	62.9%	86.7%		51.3%
	Density	**1.6**	**3.8**	**1.8**	**0.05**		**1.0**
1850.	Whites	62.6%	42.6%	60.5%	69.3%		54.0%
	Density	**2.7**	**5.4**	**2.3**	**0.34**		**1.6**
1860.	Whites	65.8%	44.5%	58.7%	59.1%	70.0%	55.4%
	Density	**3.9**	**7.4**	**4.8**	**1.2**	**0.25**	**2.5**
1880.	Whites	60.5%	35.4%	52.5%	68.5%	76.2%	53.5%
	Density	**6.0**	**11.1**	**11.0**	**3.1**	**1.0**	**6.0**
1885.	Density	**7.1**	**10.8**	**14.4**	**4.9**	**1.4**	**6.4**
1890.	Whites	60.4%	39.0%	52.5%	71.0%	77.2%	57.5%
	Density	**8.4**	**11.2**	**15.8**	**6.3**	**1.9**	**7.4**
	Increase	39.2%	2.3%	44.3%	108.5%	96.0%	45.2%
1895.	Whites	64.0%	38.7%	53.0%	69.3%	78.0%	58.4%
	Density	**10.5**	**12.4**	**18.2**	**8.1**	**2.2**	**8.8**
	Increase	47.1%	13.8%	26.3%	63.7%	56.6%	37.3%
1900.	Whites	62.1%	40.0%	49.9%	64.5%	77.6%	56.2%
	Density	**12.6**	**14.0**	**20.9**	**8.8**	**2.6**	**10.0**
	Increase	49.9%	22.9%	31.7%	39.6%	34.1%	35.0%
1905.	Whites	63.0%	41.4%	49.1%	63.1%	74.6%	56.8%
	Density	**14.7**	**13.7**	**23.7**	**11.7**	**8.7**	**11.6**
	Increase	39.9%	10.9%	30.1%	43.9%	69.7%	32.3%
1910.	Whites	65.2%	40.7%	52.7%	65.4%	74.3%	59.0%
	Density	**18.0**	**16.1**	**28.0**	**15.3**	**4.4**	**14.2**
	Increase	42.7%	15.3%	34.3%	72.7%	73.5%	42.4%
1915.	Whites	66.4%	41.4%	53.3%	67.2%	73.6%	60.7%
	Density	**21.3**	**17.5**	**31.7**	**19.8**	**6.9**	**17.4**
	Increase	45.3%	27.8%	33.7%	68.8%	87.0%	49.9%

In Florida, as in other southeastern states, negroes are usually most abundant in agricultural sections, and in 1840, when the population of West Florida was largely concentrated on the rich plantations of Jackson County, the percentage of whites in that division was only 55.5. Since then the exploitation of the pine forests has gone on at a rapid rate, white farmers have taken possession of the once despised sandy pine lands in increasing numbers, and at subsequent censuses the proportion of whites has never been less than 60 per cent. The rate of increase of population in West Florida has never been much greater or less than that of the state as a whole.

Middle Florida has a larger area of naturally fertile soil than any other division, and the early settlers soon located this by means of its dense hardwood forests. Agriculture became the leading industry at an early date, and large plantations with a predominance of negroes were the rule. As the growth of this section came at an early period, the increases in later decades have been comparatively small, as has been the case with many other fertile regions in other states. (If the hardwood and pine sections of Middle Florida were separated in the statistics still greater contrasts would be brought out, for some of the richer counties have been almost at a standstill in recent decades.) In 1830 and 1840 this division contained nearly half the population of the state, but it was overtaken in density of population by the northeastern division about 1881, by West Florida about 1904, and by Central Florida about 1912. The proportion of whites has not varied much from 40 per cent since the first census.

Northeast Florida has about the same amount of rich and poor land as West Florida, and its development has been similar in many respects. Its principal seaport, Jacksonville, has grown faster than West Florida's, Pensacola, probably mostly because of better railroad facilities, and this has given the section a larger population, especially of negroes. Between 1850 and 1860 the population more than doubled, and since the Civil War the decennial increase has never been less than 25 per cent. The numbers of the two races are nearly equal.

Very little of the land in Central Florida outside of Marion County was capable of cultivation by ante-bellum methods, and in 1860 there was only a little over one inhabitant to the square mile. Soon after the war the climate and scenery, and the possibility of raising oranges, began to attract settlers, and between 1880 and 1890 the population more than doubled. The discovery of phosphate rock in the western portions in the latter part of that decade doubtless had something to do with the increase. But the severe freezes of 1895 and 1899 struck the citrus industry a staggering blow and caused many recent immigrants to leave.[5] Between 1890 and 1900 the total population of Central Florida increased only 39.6 per cent and the white population only 27.2 per cent, and Lake, Orange, Osceola, and Brevard Counties actually lost population during that decade. The increase from 1895 to 1905 was nearly as small, but normal conditions were soon afterward restored. The proportion of whites to negroes has averaged about two to one ever since 1870.

South Florida has had the most phenomenal development of any section of the state. When the first census of Florida was taken it had only a few hundred inhabitants, and nearly all of those were in Key West. As late as 1880 there was only one person to the square mile. The soils, without any important exception, are very deficient in potassium,[6] one of the essential elements, and no extensive agriculture was possible there before the opening of the German potash mines in the third quarter of the nineteenth century.[7] (The same might be said of the long-leaf pine lands of the other sections of the state.) Even yet several thousand square miles of Everglades and wet prairies are uninhabitable. There were no railroads in South Florida until about 1890; but the mild climate was a powerful attraction, and as soon as the region became reasonably accessible tourists and settlers came in large numbers. The effects of the freeze of 1895 are noticeable in the statistics, but in the decades ending 1905, 1910, and 1915 the increase has been over 69 per cent. The drainage operations in the Everglades, although they have added very little to the habitable area as yet, have probably had something to do with the very large increase in the last decade. It is an interesting fact that in the ''scientific'' farming of South Florida the negro has little place, and the percentage of whites has never been less than 70 per cent.

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[5] In this connection see articles by R. G. Robinson on "South Florida Before the Freeze" and "South Florida Since the Freeze," in *Lippincott's Magazine* for January and February, 1897; also *7th Annual Rept. of the Florida Geol. Surv.*, 1915, p. 124.

[6] The scarcity of potassium in the soils of peninsular Florida is probably due to two essentially independent causes: first, the remoteness from regions of igneous rocks and alluvial sediments, and, second, the leaching effect of the copious summer rains.

Taking the state as a whole it is noteworthy that the whites have always been in the majority, and the proportion of them has increased a little in every decade, except at the time of the Civil War and the two great freezes. The rate of increase of population in Florida has long been more rapid than in any other eastern state.

According to the Statistical Atlas of the United States, published by the federal Census Bureau in 1914, the center of population of Florida in 1880 was near the present station of Hines, in Lafayette County. By 1890 it had moved about 19 miles southeastward, doubtless on account of the discovery of phosphate and other circumstances previously mentioned, which led to the rapid settling up of the peninsula at that time. (The use of German potash and Chilean nitrate, which are much needed on the peninsula, practically began during that decade.) But between 1890 and 1900 the center of population moved about 4 miles west-southwest, a change in direction mainly attributable, no doubt, to the exodus from the orange-growing districts because of the two severe freezes of the decade. By 1910 the development of the peninsula was again in full swing, and the center had moved across the Suwannee River, to a point about halfway between Vista and Sumner, in Levy County. Its location for 1915 has not been determined, but it is doubtless still farther southeast.

If, in this brief sketch, the state had been divided up more minutely, into natural geographical divisions, and more of the environmental and economic factors had been taken into consideration, many additional facts of considerable interest and significance could have been brought out. But it will at least serve, it is hoped, to show some of the relations of population to soil and climate, and discoveries of fertilizing materials in Florida and elsewhere, which do not seem to have been sufficiently emphasized before.

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[7] In 1909-10 the farmers of South Florida spent $16.95 for fertilizers for each acre of improved land, as compared with $1.42 for the rest of the state and 24 cents for the whole United States.